

10/026,239

Patent
IBM Docket No. FIS920010261US1

REMARKS

Claims 1 to 16 remain in the present application. Claim 1 has been amended for which there is support in the specification, claims and drawings as originally filed.

Reconsideration of the Examiner's decisions and reexamination of this application are respectfully requested.

Interview summary:

The Examiner's courtesy in granting an interview with the undersigned on February 24, 2004 is acknowledged. During the interview, the objection to the drawings and the double patenting rejection was discussed.

Objection to the specification:

The Examiner has requested the serial number for the related application noted on page 1 of Applicants' specification.

10/026,239

Patent
IBM Docket No. FIS920010261US1

The specification has been amended by incorporating the serial number of the related application.

Objection to the drawings:

In response to the objection to the drawings, Applicants are submitting herewith new drawings for consideration by the Examiner. Approval of these drawings is respectfully requested.

Double patenting rejection:

Claims 1 to 16 have been rejected by the Examiner under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1 to 26 of Sachdev et al. U.S. Patent No. 6,280,527 (hereafter “Sachdev”) in view of Spring (Metal Cleaning).

It is submitted that a double patenting rejection is not appropriate here. Sachdev is prior art under 35 USC §102(a)/103 as it has an issue date (August 28, 2001) which is prior to Applicants’ filing date (December 21, 2001). “While analogous to the non-obviousness

10/026,239

Patent
IBM Docket No. FIS920010261US1

requirement of 35 U.S.C. 103, that section is not itself involved in double patenting rejections because the patent principally underlying the rejection is not prior art." In re Braithwaite, 154 USPQ 29, 34 (CCPA 1967). See also MPEP §804. As Sachdev, "the patent principally underlying the rejection", is in fact prior art, Sachdev would seem to be not applicable to a double patenting rejection.

It is thus respectfully requested that the double patenting rejection be withdrawn.

The §103 rejection:

Claims 1 to 16 have been rejected by the Examiner under 35 USC §103(a) as being obvious over any one of Sachdev and Sachdev et al. U.S. Patent 6,277,799 (hereafter "Sachdev '799") in view of Spring (Metal Cleaning).

Claim 1 has been amended to more particularly claim Applicants' invention.

It is believed that claim 1 is patentably distinguishable over Sachdev or Sachdev '799 in view of Spring. Claim 1 is directed to cleaning paste residue from a workpiece by electrolytically contacting the workpiece with an aqueous solution of TMAH.

Sachdev is directed to the cleaning of paste residues from a screening mask using a solution of TMAH. Sachdev does not disclose the step of electrolytically contacting the workpiece with an aqueous solution of TMAH. Sachdev '799 discloses an aqueous cleaning solution for removing paste residue from a screening mask wherein the aqueous cleaning solution can contain TMAH. Again, Sachdev '799 does not disclose the step of electrolytically contacting the workpiece with an aqueous solution of TMAH. The Examiner cites Spring for the proposition that it is conventional to electrolytically clean articles and therefore it would have been obvious to include electrolytic cleaning in the method of Sachdev and Sachdev '799.

Applicants respectfully disagree with the Examiner's conclusion that it would have been obvious to combine Sachdev or Sachdev '799 with Spring. First, there is no motivation shown by the Examiner as to why one skilled in the art would want to combine Spring with Sachdev or Sachdev '799 since Sachdev and Sachdev '799 apparently work well by themselves. Second, all of Sachdev, Sachdev '799 and Spring involve the inherently unpredictable chemical arts. Thus, just because Sachdev or Sachdev '799 and Spring can be combined doesn't mean that they should be combined. Sachdev and Sachdev '799 both relate to the aqueous cleaning of paste residue from metal masks while Spring relates to the removal of oily soil and smut. Due to the inherently unpredictable nature of the chemical arts, it cannot be assumed that the mere combination of such disparate references will produce any

new or different results or, for that matter, will even work. Moreover, the Examiner has not provided any rationale to indicate why such disparate references in such inherently unpredictable chemical arts should be combined. Lastly, Applicants have demonstrated in the various examples that vastly superior and unexpected results occur with the electrolytic cleaning of the present invention. For example, the time to ultrasonically clean a mask using a 0.8 weight percent TMAH solution was dramatically reduced from 100 seconds to just 20 seconds using electrolytic cleaning according to the present invention.

For all of the above reasons, it is submitted that the Examiner has failed to state a prima facie case of obviousness with respect to claim 1.

Inasmuch as claims 2 to 16 depend, directly or indirectly, from claim 1, and claim 1 is believed to be patentable, then claims 2 to 16 should be patentable as well. In addition, claim 7 is believed to be independently patentable as well. Claim 7 combines nonelectrolytically cleaning with electrolytically cleaning. As stated above and bears repeating here, (i) there is no motivation shown by the Examiner as to why one skilled in the art would want to combine Spring with Sachdev or Sachdev '799 since Sachdev and Sachdev '799 apparently work well by themselves, (ii) all of Sachdev, Sachdev '799 and Spring involve the inherently unpredictable chemical arts, and (iii) Applicants have demonstrated in the various examples

10/026,239

Patent
IBM Docket No. FIS920010261US1

that vastly superior and unexpected results occur with the electrolytic cleaning of the present invention. Accordingly, claim 7 should be patentable.

Summary:

In view of all of the preceding remarks, it is submitted that claims 1 to 16 are in condition for allowance. If the Examiner finds this application deficient in any respect, the Examiner is invited to telephone the undersigned at the Examiner's earliest possible convenience.

Respectfully Submitted,
James N. Humenik, et al.



Ira D. Blecker Reg. No. 29,894
Telephone: (845) 894-2580

International Business Machines Corporation
Zip 482
2070 Route 52
Hopewell Junction, NY 12533
Fax No. (845) 892-6363